readings of a given charge taken from different capacitors are averaged to reduce the noise on the charge measurement. This process can be extended in a similar fashion to a large number of capacitors (32 through 33), thus reducing readout noise. As will be appreciated, the capacitor/readout unit 33 includes a capacitor 33a and circuitry 33b to sample the voltage across the capacitor 33a. In this design, any given charge is essentially moved along a line of capacitors to allow it to be read out as often as desired. After all desired readout/averaging is done, the charge is dumped (as in a conventional CCD). --

Please replace the paragraph beginning on line 5, page 4 with:

-- In an alternate design shown in Fig. 4, there are several (in this case four) capacitors with associated readout circuitry arranged around the light-sensitive area 30. Charge from individual charge generation cycles (pixel times) is transferred to these capacitors, e.g., cycling around. A first charge is moved to capacitor/readout unit 35 and stays there for four pixel cycles for repeated readout. The capacitor/readout unit 35 includes a capacitor 35a and circuitry 35b for sampling the voltage across the capacitor 35a. One pixel cycle later the next charge is moved to capacitor/readout unit 36, another cycle later the next charge is moved to capacitor/readout unit 37. It will be appreciated that the capacitor/readout unit 36 includes a capacitor 36a and circuitry 36b to sample the voltage across the capacitor 36a. Similarly, the capacitor/readout unit 37 includes a capacitor 37a along with circuitry 37b to sample its voltage. The next charge generated is moved to capacitor/readout unit 38 which includes a capacitor 38a and circuitry 38b to sample its voltage. Once the next charge is generated, the charge in capacitor/readout unit 35 is dumped and the new charge is moved there, thus restarting the cyclic acquisition of the data. --

Remarks

Re-examination and reconsideration of the rejections are hereby requested.

The present invention is a high quantum efficiency point detector system. The high quantum efficiency is achieved by employing a detector having a light sensitive cell size comparable to the area of a light beam input. By having the light detector cell size comparable to the light beam area, a detector such as a CCD, known in multi-pixel or imaging situations, is modified into a point detector that can outperform photomultiplier tubes in terms of achieved signal-to-noise ratio.